

OVERVIEW: PROPOSED FISCAL YEAR 1998 PROGRAM ACTIVITIES AND COST ESTIMATE

The CALFED Bay-Delta Program has prepared estimates of activities and costs to begin early implementation of the Program. This paper provides an overview of the proposed FY 1998 program and serves as an introduction to the attached cost matrix.

INTRODUCTION

The CALFED Bay-Delta Program is developing a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. This Program is critical to the future of California because the Bay-Delta system is the largest estuary on the West Coast, providing habitat for 120 fish and wildlife species, including many listed as threatened or endangered. The Bay-Delta system is also critical to California's economy, providing drinking water for two-thirds of Californians and irrigation water for 200 crops, including 45 percent of the nation's produce.

The CALFED Bay-Delta Program is preparing a Programmatic EIR/EIS and is scheduled to select a final preferred alternative in Fall 1998. This preferred alternative must address Bay-Delta problems in ecosystem quality, water quality, levee system vulnerability, and water supply reliability. The solution to these problems will require an intensive program costing billions of dollars with implementation extending over several decades. It will require funding from State, Federal, and stakeholder sources and close coordination with other ongoing programs.

PROPOSED FY 1998 PROGRAM

The Program is currently evaluating three potential alternatives. Estimated capital costs generally fall in the \$4 to \$8 billion range, and implementation of the preferred alternative may take 20 to 30 years. Given this length of time, it is important to begin implementation as soon as practical. Taking action now on ready projects lessens the time frame for implementation and early results will build support and commitment for implementing the full alternative.

Stakeholder funding has totaled almost \$22 million to date, and \$10 million or more in additional funding is expected in 1997. State funding from Proposition 204 (*passed by voters on November 5, 1996*) includes \$60 million for Category III; \$93 million as cost share for the Central Valley Project Improvement Act; \$390 million available for habitat restoration once the preferred alternative is selected, the EIR/S is certified and a formal State/Federal cost-share agreement has been implemented; and additional funding for watershed management, water quality improvements and levee improvements. Federal funding authorized through the California Bay-Delta Environmental Enhancement and Water Security Act (HR4126) is designed to match State funding through Proposition 204 and stakeholder funding.

COORDINATION

The Restoration Coordination Program seeks to maximize the cost-sharing opportunities between CALFED/Category III and other ecosystem restoration funding sources. For instance, Restoration Coordination staff have identified many Central Valley Project Improvement Act (CVPIA) restoration activities that are closely aligned with those of CALFED. They have been working with CVPIA staff on a variety of tools that can be used to better coordinate these two large restoration efforts. Some of the concepts being developed include joint development of priorities and joint solicitation and review of projects to address these priorities. Staff are also working with other programs such as the Four Pumps Program administered by DWR and DFG and the Tracy Fish Agreement program administered by USBR and DFG. Coordinating various restoration programs in the Bay-Delta ecosystem will maximize the effectiveness of available funding and will jump start ecosystem recovery.

RESTORATION RESERVE

As shown by the 1997 New Year's Day floods, new opportunities and challenges in ecosystem restoration can develop quickly. To provide resource flexibility to take advantage of opportunities, the Restoration Coordination Program will maintain a restoration reserve fund for the purpose of providing funding flexibility to respond to opportunities which occur out of phase with the normal funding cycle. These funds shall be for projects which are related to an emergency, unique opportunity, or can leverage matching monies which are time sensitive.

When the restoration reserve fund is used, the program will identify the rationale for providing funding outside the normal funding cycle. Any projects funded through the restoration reserve will receive public review through the Roundtable and BDAC.

Each of these alternatives includes an array of specific actions which will provide a comprehensive solution to the Bay-Delta issues of ecosystem quality, water quality, levee system vulnerability, and water supply reliability. The differences between the alternatives lie mainly in the method of transporting water through and around the Delta, and the amount of additional storage which would complete each alternative.

While the details of the preferred alternative will not be finalized until Fall 1998, the proposed FY 1998 program concentrates on activities that will be beneficial to the long-term Program regardless of which alternative is ultimately chosen. The FY 1998 program includes only activities that are included in each of the three alternatives and also provide early implementation benefits. This implementation will also provide valuable information for use in adaptively managing the system in later years of the Program.

The following cost matrix includes potential funding levels and potential funding agencies which are based solely on CALFED staff's judgement. The cost matrix is followed by more detailed text descriptions of the proposed activities.

The cost matrix and supporting text include activities listed specifically for ecosystem quality, water quality, levee system vulnerability, and water supply reliability. However, many of the activities will produce multiple benefits across these four areas. The costs were developed for specific actions, but more detailed studies in later phases of the Program may shift money between actions with similar results. For instance, these studies may indicate that the Program's water quality objectives can be met more effectively by adjusting the balance between land conversion for water quality improvement and levels of wetlands treatment.

Actions common to all three alternatives ready to be implemented in FY 1998.

Many of the actions included in the alternatives are common to all three and could be implemented now as part of existing authorities if funding were available. Therefore, even before the programmatic environmental documentation is completed, CALFED has the opportunity to begin work on a set of projects identified as needed for system recovery. Because these actions are included in all three of the Program alternatives, they can be implemented prior to completion of the programmatic environmental documentation. However, projects pursued for early implementation must:

- ◆ be justified independently of the Program by the lead agencies for that project;
- ◆ be accompanied by an adequate environmental document, the preparation of which includes consultation with responsible and trustee agencies; and,
- ◆ not prejudice the ultimate decision on the Program.

These are projects and programs, especially related to water quality and ecosystem restoration, on which there is broad support. Many of these center around ecosystem restoration, such as habitat improvements for many specific species of concern, wetland restoration efforts throughout the system, and watershed restoration efforts in upstream areas throughout the Sacramento and San Joaquin river systems.

Process for Approving Early Implementation Projects

Program level actions have been identified (such as restoration of 10,000 to 20,000 acres of permanent and seasonal wetlands habitat in the Delta). The process to identify specific projects will include both agencies and stakeholders. The key groups involved in project decision-making processes include: 1) the staff of the CALFED agencies; 2) the Ecosystem Roundtable; and 3) CALFED.

Each year, a CALFED agency team will develop a draft set of early implementation projects and programs to be considered for funding. A list of projects recommended for funding will go to the Ecosystem Roundtable, along with CALFED, for review and discussion. The Ecosystem Roundtable is a subcommittee of the FACA² chartered Bay Delta Advisory Council, and was appointed to provide stakeholder input into the process of priority setting and project selection. Its mission is to provide advice on development of an annual integrated planning process for restoration project selection and on integration and coordination with existing State and Federal restoration programs to increase overall restoration effectiveness. The Roundtable will review an annual work plan to be approved by CALFED.

COORDINATION WITH OTHER ONGOING PROGRAMS

It is important to view the proposed budget estimate in context of existing programs which complement the projects and work supported by the Program's budget. For example, work under the auspices of the *Central Valley Project Improvement Act's (CVPIA)* Restoration Fund and the Energy and Water Development appropriations will be in tandem with the ecosystem restoration funds spent through the Program—addressing some of the same needs (such as fish screen improvements and habitat acquisition) as well as other complementary programs (such as supplemental water acquisitions). These programs will not be in competition with each other; rather, through the work of the Ecosystem Roundtable, they will be coordinated to support the same overall ecosystem goals and fund complementary projects and programs (consistent with the specific mitigation and restoration objectives and authorities set forth in the CVPIA).

COORDINATION OF STATE, FEDERAL, AND STAKEHOLDER FUNDING

The following matrix includes program implementation activities and cost estimates proposed for FY 1998. Funding for these early implementation actions will come from several sources. It is anticipated that State, Federal, and stakeholder funding will be required to complete this implementation. While the precise allocation of funding is yet to be defined, some funding mechanisms have been identified.

²Federal Advisory Committee Act

PROPOSED FY 1998 PROGRAM ACTIVITIES AND COST ESTIMATE

Proposed CALFED Program Budget	Proposed Activities	Potential Federal Funding	Potential State Funding Sources
I. ECOSYSTEM QUALITY			
Habitat Acquisition and Restoration			
\$47 million	a. Acquisition of key properties and habitat restoration in partnership with others for fish and wildlife	\$47 million ³ USDA (NRCS) FWS COE NFWF	Prop. 204 (Cat. III) ⁴
\$8 million	b. Refuge and Sacramento and San Joaquin meander belt expansion	\$8 million FWS	Prop. 204 Cat. III, Sac Valley habitat measures, or appropriation to implement SB 1086 program
\$7 million	c. Develop or purchase wetlands in the Delta	Cat. III varies ^{5, 6}	Prop. 204 Cat. III
\$20 million	d. Delta and tributary modifications for the improvement of the environment (relating to habitat restoration and protection associated with Project and non-Project levees)		Prop. 204 Cat. III

³ These estimates were developed by the CALFED Bay-Delta Program and do not reflect or endorse individual agency requests for funding.

⁴ Descriptions in parentheses () refer to article titles in Prop. 204.

⁵ Federal participation of \$20 million for Category III is proposed for FY 1998 (USBR and NMFS) in these categories.

⁶ Potential Category III activity.

Identified Proposition 204 funds are exclusive of the CALFED Bay-Delta Ecosystem Program (Chapter 7), which are tied to completion of the EIR/S on the preferred alternative.

Proposed CALFED Program Budget	Proposed Activities	Potential Federal Funding	Potential State Funding Sources
\$11 million	e. Sacramento River habitat improvement	\$11 million COE	Prop. 204 (Cat. III, Sac Valley habitat measures, or appropriation to implement SB 1086 program)
\$8 million	f. Delta island and levee habitat improvements	Cat. III varies \$3 million USGS	Prop. 204 (Cat. III)
\$2 million	g. Watershed management for habitat enhancement	\$2 million NRCS EPA	Prop. 204 (Watershed rehabilitation)
\$3 million	h. Reconnaissance, feasibility, design, and environmental documentation for habitat restoration and new projects		Prop. 204 (Cat. III or Sac Valley habitat measures)
Fish Screening and Passage			
\$6 million	i. Fish ladders and/or removal of barriers to improve fish passage at key locations	Cat. III varies	Prop. 204 (Cat. III, CVPIA State match, or Sac Valley habitat measures)
\$10 million	j. Improve fish screening throughout the Bay-Delta system to reduce losses of Delta resident and migratory fish species	\$10 million USBR	Prop. 204 (Cat. III, CVPIA State match, or Sac Valley habitat measures)
\$1 million	k. Reconnaissance, feasibility, design, and environmental documentation for fish passage/screening projects	Cat. III varies	Prop. 204 (Cat. III or CVPIA State match)
\$2 million	l. Program to isolate and/or remove gravel pits and related debris along rivers to improve fish passage	Cat. III varies	

Proposed CALFED Program Budget	Proposed Activities	Potential Federal Funding	Potential State Funding Sources
\$37 million	m. State cost-share of fish and wildlife restoration measures required by Section 3406 of CVPIA		Prop. 204 (CVPIA State match)
Exotic Species Management			
\$2 million	n. Improve control of exotic species which threaten the recovery and biodiversity of native species	Cat. III varies	Prop. 204 (Cat. III)
Monitoring of Ecosystem Health			
\$3 million	o. Comprehensive monitoring of Bay-Delta ecosystem health and the effectiveness of restoration activities (Adaptive Management)	\$1 million USBR	Prop. 204 Cat. III or IEP funding
II. WATER QUALITY			
\$10 million	a. Conduct watershed management pilot program for water quality improvement	\$10 million EPA USDA (NRCS)	Prop. 204 (Watershed rehabilitation)
\$1 million	b. Real time water quality management		Prop. 204 (Drainage management)
\$11 million	c. Pollutant source control to reduce toxic discharges to the ecosystem from point- and non-point sources	\$11 million EPA	Prop. 204 (Drainage management - Sac Valley habitat measures)
\$5 million	d. Land conversion and/or other methods to help control water quality from agricultural drainage		Prop. 204 (Drainage management)
\$1 million	e. Pilot program for underground detention of agricultural drainage		Prop. 204 (Drainage management)

Proposed FY 1998 Budget — Revised March 11, 1997

Proposed CALFED Program Budget	Proposed Activities	Potential Federal Funding	Potential State Funding Sources
\$12 million	f. Construct wetlands wastewater treatment for portions of existing discharges to the estuary		Prop. 204 (Clean water and drainage management)
III. LEVEE SYSTEM VULNERABILITY			
\$12 million	a. Delta levee improvements/habitat restoration and habitat protection		Prop. 204 (Delta levees)
IV. WATER SUPPLY RELIABILITY			
\$1 million	a. Technical planning and support to water districts for water use efficiency measures		Prop. 204 (Water supply reliability)
\$10 million	b. Financial assistance for water use efficiency measures and groundwater recharge		Prop. 204 (Conservation)
\$7 million	c. Low interest loans/grants for water reclamation		Prop. 204 (Water recycling)
\$3 million	d. Studies, designs, and environmental documentation for projects to increase water supply reliability and opportunities		Prop. 204 (Water supply reliability)
V. ADDITIONAL CATEGORY III CONTRIBUTIONS			
\$20 million	Additional Federal contribution to Category III activities	\$20 million	

\$260 million	TOTAL FY 1998	\$143 million	
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FISCAL YEAR 1998 ACTIVITIES

The following sections provide supplemental information for the FY 1998 cost matrix.

I. ECOSYSTEM QUALITY

Habitat Acquisition and Restoration

These activities will fund habitat acquisition and initiate habitat restoration to conserve and enhance natural ecosystem processes throughout the Bay/Delta ecosystem. Three major habitat/restoration concepts are:

- Acquire key habitat from willing sellers to preserve ecosystem values and future opportunities for restoration.
- Initiate restoration and enhancement projects on newly acquired and existing habitat.
- Conduct research, development, monitoring, demonstration, and pilot projects to provide better information to guide and improve future actions.

Effective restoration will provide spawning, nesting, rearing, foraging, brooding and cover habitat, increase food chain productivity, and restore natural hydrologic patterns to enhance natural processes and assist in recovery of species of concern. Habitat restoration is the foundation of the Ecosystem Restoration Program Plan. The activities and actions described below will preserve existing habitat, retain options to restore habitat, and initiate restoration in a manner that will preserve future options for improved, cost-effective restoration through adaptive management. Research, development and demonstration projects are key to long-term restoration success. Acquisition and restoration activities will be coordinated with other State, Federal and private efforts. Without full funding, some opportunities and options may be lost, and recovery of special status species may be delayed.

The Habitat Acquisition and Restoration Program includes eight activities. The first of the eight activities is not targeted to specific practices or regions of the Bay-Delta ecosystem.

I-a. Acquisition of Key Properties and Habitat Restoration in Partnership with Others for Fish and Wildlife

This activity will fund acquisition of existing habitat and restorable lands from willing sellers, new and continuing restoration, development of partnerships, and the design and implementation of demonstration projects. The activity will be designed to maximize opportunities, coordination and effective use of information within the adaptive management program. Without full funding, some opportunities to acquire and restore valuable habitat may be lost.

Total FY 1998 Funding Request: \$47 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: 1) USFWS, 2) USDA, 3) COE, 4) NFWF, 5) USBR, 6) USEPA, and perhaps others. Potential State funding through Proposition 204 (Category III).

Key actions: Would acquire from willing sellers 15,000 to 30,000 acres in fee and/or easements for fisheries, waterfowl and other wildlife habitat and/or initiate restoration and demonstration projects on existing and newly acquired lands. The potential habitats could include expansion of National Wildlife Refuges, freshwater tidal marshes, slough channels on shallow islands, floodplain and meander corridors, floodplain wetlands, shaded river and riparian woodlands, and others as appropriate. These actions could be conducted within the Delta, San Pablo/Suisun Bays, and the Sacramento and San Joaquin watersheds.

I-b. Refuge and Sacramento and San Joaquin Rivers Meander Belt Expansion

This targeted activity will fund acquisition of meander belt habitat through actions such as expansion of the National Wildlife Refuge System within the Bay-Delta watershed. This habitat is needed to ensure viable key habitats within the Bay-Delta system. Without full funding, some opportunities to acquire meander belt habitat may be lost.

Total FY 1998 Funding Request: \$8 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USFWS and perhaps others. Potential State funding through Proposition 204 (Category III, Sac Valley Habitat Measures) or appropriation to implement SB 1086 Program.

Key actions: Would acquire 2,000 to 6,000 acres of key habitat from willing sellers and/or initiate restoration on existing and newly acquired lands. Some examples of potential habitat acquisition and restoration are:

- Acquire, from willing sellers, land and/or easements within existing meander corridors along the mainstem Sacramento River.
- Expand existing National Wildlife Refuges.
- Initiate studies regarding the feasibility of reconfiguring major Sacramento River bypasses and managing for various habitat types; for example, floodplain wetlands along the Colusa Drain, or spawning and rearing habitat enhancement and establishment of riparian woodlands in the Yolo Bypass.
- Design and implement demonstration projects to restore meander corridors and floodplain wetlands along the Sacramento River.
- Design and implement demonstration projects to restore shaded river habitat and riparian woodland habitat on the mainstem Sacramento River, tributaries and bypasses.

- Design and implement demonstration projects to restore natural channel functions within reaches of the Sacramento River tributaries adversely impacted by gravel mining.
- Study the feasibility of restoring the meander belt of the lower San Joaquin River.

I-c. Develop or Purchase Wetlands in the Delta

This targeted activity will fund acquisition of wetland habitat within the Delta. Without full funding, some opportunities to acquire Delta wetland habitat may be lost.

Total FY 1998 Funding Request: Potential Federal Category III participation varies⁷. Potential State funding through Proposition 204 (Category III).

Key actions: Would acquire 1,000 to 3,000 acres of wetlands from willing sellers and/or initiate restoration on existing and newly acquired lands. Some examples of potential habitat acquisition and restoration are:

- Design and implement demonstration projects restoring freshwater tidal marshes and slough channels on shallow islands, especially in the eastern, central and northwestern Delta, the west shore of the Sacramento River, and the lower San Joaquin River.
- Acquire from willing sellers lands and/or easements and restore floodplain wetlands in the eastside Delta tributary watersheds.
- Acquire from willing sellers lands and/or easements in the western and/or central Delta to preserve opportunities for long-term restoration of freshwater tidal marshes, slough channels and other desirable habitat types.

I-d. Delta and Tributary Modifications for the Improvement of the Environment (relating to Habitat Restoration and Protection Associated with Project and Non-Project Levees)

This targeted activity will restore shallow riparian and shallow water in-Delta habitat along levees. Without full funding, restoration of habitat and recovery of species of concern may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Category III).

Key actions: 10 to 30 miles of levee-associated habitat will be restored, and associated habitat inland will be protected.

⁷ Federal participation of \$20 million for Category III is proposed for FY 1998 (USBR and NMFS)

I-e. Sacramento River Habitat Improvement

This targeted activity will restore habitat associated with Sacramento River levees. Without full funding, restoration of habitat and recovery of species of concern may be delayed.

Total '98 Funding Request: \$11 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: COE and perhaps others. Potential State funding through Proposition 204 (Category III, Sac Valley Habitat Measures) or appropriation to implement SB 1086 Program.

Key actions: 2 to 5 miles of river levee-associated habitat will be restored when levee repairs are required and/or priority vegetation restoration throughout the levee system will be provided. These could include restoration of habitat, setback levees or other appropriate actions.

I-f. Delta Islands and Levee Improvements

This targeted activity will develop aquatic habitat associated with waterside levee banks on western Delta islands, analysis of subsidence controls and levee seismic evaluations and will include habitat considerations, and dredge materials will be reused to restore aquatic habitats. Without this funding, some opportunities to improve Delta islands and levees, and recovery of species of concern, may be delayed,

Total FY 1998 Funding Request: \$3 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USGS and perhaps others. Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III).

I-g. Watershed Management for Habitat Enhancement

This targeted activity will use watershed management techniques for habitat enhancement, and benefits in control of non-point source pollution will be obtained. Without full funding, recovery of species of concern may be delayed.

Total FY 1998 Funding Request : \$2 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: NCRS, EPA, and perhaps others. Potential State funding through Proposition 204 (Watershed rehabilitation).

I-h. Reconnaissance, Feasibility, Design and Environmental Documentation for Habitat Restoration and New Projects

This targeted activity will provide assistance for evaluation and design of restoration options and for necessary environmental documentation. Without full funding, some delays in implementation of habitat restoration may occur and recovery of species of concern may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Category III, Sac Valley Habitat Measures).

Fish Screening and Passage

Aquatic life in the Bay-Delta and its tributaries suffers direct mortality by diversion of water into water supply systems, and spawning and other habitat is inaccessible because of structures located in channels and streambeds. This program would modify or remove existing structures to reduce mortality, increase access to spawning habitat, and facilitate fish passage. The initial phase of the program will emphasize research and development, demonstration and pilot projects, and adaptive management to ensure that long-term improvements are as effective and cost-efficient as possible. Fish screening and passage activities will be coordinated with other State, Federal and private efforts.

Without this program, mortality and loss of habitat will continue at levels that could cause continued decline in species of concern or delay their recovery. Fish screening and passage improvements will also increase the effectiveness of habitat acquisition and restoration activities.

I-i. Fish Ladders and/or Removal of Barriers to Improve Fish Passage at Key Locations

This activity will allow key fish species to pass existing barriers and reach new habitat. Without full funding, direct mortality of species of concern and poor access to suitable habitat may continue, and recovery may be delayed.

Total FY 1998 Funding Request: Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III, CVPIA State Match, or Sac Valley Habitat Measures).

Key actions: Two to five fish ladders will be built, and/or barriers will be removed where direct mortality or migration delays can be reduced, and previously inaccessible stream channels will be made available for spawning.

I-j. Improve Fish Screening throughout the Bay-Delta System to Reduce Losses of Delta Resident and Migratory Fish Species

This activity will improve or eliminate unscreened or inadequately screened diversions which cause mortality of species of concern. Without full funding, direct mortality of species of concern may continue for a longer period.

Total FY 1998 Funding Request: \$10 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USBR and perhaps others. Potential State funding through Proposition 204 (Category III, CVPIA State Match, or Sac Valley Habitat Measures).

Key actions: 5 to 10 of the highest priority diversions will be screened, or diversions will be consolidated or relocated to reduce fish losses. Some examples of fish screening projects are:

- Initiate first phase of program to install fish screens on Delta, Sacramento River and San Joaquin River water diversions, and consolidate and/or relocate diversion sites where feasible and effective.
- Design and implement demonstration projects to replace low diversion dams with "fish friendly" facilities, and remove obsolete dams and other obstructions where appropriate on the Sacramento River and its tributaries.

I-k. Reconnaissance, feasibility, design and environmental documentation for fish passage/screening projects

This activity will contribute to necessary studies and design of fish passage and screening projects throughout the Bay-Delta system. Without full funding, passage and screening projects may be delayed, or projects may not be as effective as possible.

Total FY 1998 Funding Request: Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III, CVPIA State match).

I-l. Isolate and/or Remove Gravel Pits and Related Debris Along Rivers to Improve Fish Passage

Design and implement demonstration projects to restore natural channel functions within reaches of the San Joaquin River and Sacramento River tributaries adversely affected by gravel mining.

Total FY 1998 Funding Request: Potential Federal Category III participation varies.

I-m. State Cost-Share of Fish and Wildlife Restoration Measures Required by Section 3406 of CVPIA

Proposition 204 authorizes the State of California to provide matching funds for CVPIA authorized improvements to the Bay-Delta ecosystem.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (CVPIA State match).

Exotic Species Management

Exotic (introduced) species are an important but sometimes undesirable component of the Bay-Delta ecosystem. Introduced species can alter habitat, crowd out native species, and compete with or feed on species of concern. Many undesirable species which have not yet become established in the Bay-Delta have the ability to do so, so exotic species management has an element of protection as well as control. Without full funding, exotic species will continue to limit the recovery of species of concern at unnecessary levels.

I-n. Improve Control of Exotic Species Which Threaten the Recovery and Biodiversity of Native Species

This activity will improve control of exotic species which threaten the recovery of native species, and/or threaten the health of the estuary.

Total FY 1998 Funding Request: Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III).

Key actions: Develop a program for exotic species management. Some examples of exotic species management include:

- Control exotic species by initiating and enforcing ballast discharge requirements in the Delta, Suisun Bay and San Pablo Bay.
- Remove invasive introduced vegetation in the Delta.

Monitoring of Ecosystem Health

This program will begin comprehensive monitoring of the Bay-Delta ecosystem and the effectiveness of restoration activities. Monitoring will be coordinated with other State and Federal activities.

I-o. Comprehensive Monitoring of Bay-Delta Ecosystem Health and the Effectiveness of Restoration Activities (Adaptive Management)

This activity will provide the information needed to implement a sound program of adaptive management to expand existing monitoring efforts to focus on indicators of system health not now being evaluated. This activity will provide the data to evaluate our actions taken as part of the FY 1998 efforts.

Total FY 1998 Funding Request: \$1 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USBR and perhaps others. Potential State funding through Proposition 204 (Category III) or IEP funding.

II. WATER QUALITY

Degraded water quality diminishes the quality of aquatic habitat and can have direct toxic effects on fish and wildlife species. Municipal and industrial users pay substantial costs to reduce undesirable constituents in delivered water supplies, and water quality can affect crops and agricultural production costs. Examples of potential activities include land conversion, implementation of habitat-enhancing farming practices, and improved range management practices. Programs will be designed to encourage participation by willing

landowners and to maximize multiple benefits. Without full funding, improvements in water quality would be delayed, leading to continued negative effects on the aquatic ecosystem, agriculture and urban drinking water costs and quality.

II-a. Conduct a Watershed Management Pilot Program for Water Quality Improvement

This pilot program will be used to determine the long-term watershed management program and its use in improving water quality for all water users. Pilot programs will be established, and information will be used to design future watershed management programs.

Total FY 1998 Funding Request: \$10 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USDA (NCRS), EPA, and perhaps others. Potential State funding through SWRCB implementation of Proposition 204 (watershed rehabilitation).

Key actions: Approximately 20 percent of high priority watershed management pilot programs will be completed, primarily on undammed tributaries. Watershed management for water quality improvement would include erosion control, wetlands protection and other appropriate actions.

II-b. Real-Time Water Quality Management

This activity will establish real-time water quality management by direct monitoring and response to water quality variables.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Drainage management).

II-c. Pollutant Source Control to Reduce Toxic Discharges to the Ecosystem from Point and Non-point Sources

Pollutant source controls form the foundation for the Water Quality Common Program. This activity will target high-priority sources to reduce toxic discharges in the Bay-Delta system and fund appropriate monitoring efforts.

Total FY 1998 Funding Request: \$11 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: EPA and perhaps others. Potential State funding through Proposition 204 (Drainage management).

Key actions: Approximately 10 percent of high priority source control actions will be completed.

II-d. Land Conversion and/or Other Methods to Help Control Water Quality from Agricultural Drainage

Agricultural drainage water often carries undesirable constituents such as dissolved solids, sediments, and agricultural chemicals. This activity will use land conversion and/or other methods to help improve water quality from agricultural drainage.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Drainage management).

II-e. Pilot Program for Underground Detention of Agricultural Drainage

This activity will establish a pilot program to determine the feasibility, costs and effectiveness of underground detention of agricultural drainage for water quality improvement.

Total FY 1998 Funding Request : Potential State funding through Proposition 204 (Drainage management).

II-f. Construct Wetlands Wastewater Management Treatment for Portions of Existing Discharges to the Estuary

Wetlands wastewater treatment provides a proven technology to reduce wastewater discharges to improve water quality. This activity will establish a pilot program to reduce the amount of pollutants discharged into the Bay-Delta system from wastewater treatment plants. Results will be used to determine long-term use of wetlands treatment.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Clean water and drainage management).

Key actions: A pilot program will be established with the goal of reducing pollutants from approximately 10 to 15 million gallons per day of discharges.

III. LEVEE SYSTEM VULNERABILITY

Poor levee conditions increase the risk of catastrophic levee failure and flooding of Delta islands. Levee conditions have deteriorated over time due to natural and man-caused factors, and the protective value of levees has declined as Delta islands have subsided with oxidation and erosion. Flooding of Delta islands creates risks to human life and economic values associated with island land uses are lost unless and until islands are reclaimed. The costs of reclaiming flooded islands may be prohibitive. Without full funding, the existing level of risk of flooding will continue or increase.

III-a. Delta Levee Improvements/Habitat Restoration and Habitat Protection

This activity will make repairs to high priority levees.

Total FY 1998 Funding Request : Potential State funding through Proposition 204 (Delta levees).

Key actions: Approximately 3 to 6 miles of high priority levee repairs will be completed.

IV. WATER SUPPLY RELIABILITY

The reliability of municipal, industrial and agricultural water supplies from the Bay-Delta is diminished by the natural variability of precipitation and the need for more water for ecosystem restoration. This program will increase water supply reliability by increasing water use efficiency, groundwater recharge and water reclamation. These activities reduce dependence on Bay-Delta supplies, increase reliability, and allow more flexibility for dealing with future water supply needs. Without full funding, water supply reliability will continue to be unnecessarily diminished.

IV-a. Technical Planning and Support to Water Districts for Water Use Efficiency Measures

Technical planning is needed for water districts to improve their water use efficiency. This activity will provide funding and technical expertise in water efficiency analysis and implementation of improvements. Without full funding, water use efficiency improvements may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Water supply reliability).

IV-b. Financial Assistance for Water Use Efficiency Measures and Groundwater Recharge

Reduced demand by improved efficiency effectively increases supply, and groundwater recharge is an established and cost-effective means of ensuring supplies when surface water supplies are less available. This activity will provide financial incentives for efficiency and recharge improvements. Without full funding, water use efficiency and groundwater recharge measures may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Conservation).

Key actions: Incentives for continued implementation of existing urban Best Management Practices and agricultural Efficient Water Management Practices will be provided.

IV-c. Low Interest Loans/Grants for Water Reclamation

Reclamation of wastewater is an established and effective source of water supply in California. This activity will provide funding for reclamation of wastewater.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Water recycling).

Key actions: Facilities for reuse of 1,000 to 3,000 acre-feet per year will be provided, the extent of reuse depending on the intended use of the reclaimed water.

IV-d. Studies, Designs and Environmental Documentation for Projects to Increase Water Supply Reliability and Opportunities

This activity will provide for design and implementation studies of methods to increase water supply reliability in California. Without full funding, implementation of water supply improvements may be delayed, and water supply reliability will continue to be unnecessarily diminished.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Water supply reliability).